

~~SECRET~~

[redacted] (CTD) (FBI)

From: [redacted] (CTD)(FBI)
Sent: Thursday, July 18, 2013 2:11 PM
To: [redacted]
Subject: Onion Pi White Paper --- ~~SECRET//NOFORN~~ [redacted] (S)

SentinelCaseId: NON-RECORD

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Classification: ~~SECRET//NOFORN~~ [redacted] (S)

Classified By: F12M89K55
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All:

Here is my Onion Pi white paper. Please let me know if you have any questions, feedback, suggestions, etc. Thanks,

[redacted]



SigDev Onion
Pi.docx

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Classification: ~~SECRET//NOFORN~~ [redacted] (S)

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~~SECRET//NOFORN~~ [redacted] (S)



Counterterrorism Division
Electronic Communications Analysis Unit (ECAU)

16 July 2013

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Onion Pi

Summary: (~~S//NF~~) As of June 2013, Adafruit Industries developed a portable proxy device integrating the Tor network with a Raspberry Pi microcomputer, according to open-source reporting. The device is designed to automatically route all internet traffic through the Tor network, which applies layers of encryption to prevent snooping and hops a series of servers to obscure location. [redacted] (S)

Adafruit Industries

(U) According to its website, Adafruit Industries, founded in 2005 by an MIT engineer, is focused on designing electronic devices for all ages and skill levels, as well as creating an online resource for learning about electronics.

(U) Source: *Adafruit.com*.

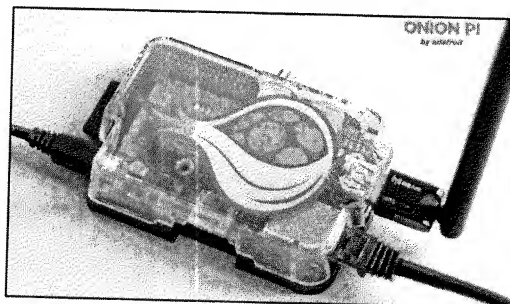
Raspberry Pi

(U) According to its website, Raspberry Pi is a cheap (\$35) single-board minicomputer designed to teach children the basics of programming. It incorporates USB, HDMI, Ethernet, and SD card ports.

(U) Source: *raspberrypi.org*.

Details: (~~S//NF~~) Technically savvy FBI subjects have indicated an awareness of this newly-created device and an eagerness to test its effectiveness. [redacted] (S)

Significance: (~~S//NF~~) While the Tor network is a well-known operational security tool among extremists, this is the first commercially available device that applies Tor to an entire wireless hotspot. Starting in 2010, Tor developers launched their own similar project called Onionbox, with a targeted cost of around \$75, but open-source research indicates that the router is still in beta-testing and has yet to be marketed for sale.⁴ [redacted]



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While the Onion Pi improves the ease and portability of accessing the Tor network, it is too early to tell whether extremist actors will widely adopt the device to conceal nefarious activity.

(U) ECAU POC: IA [redacted]

[redacted] (S)

¹ (U) Internet site; Adafruit.com; "Onion Pi;" 17 June 2013; UNCLASSIFIED; UNCLASSIFIED; (U) <http://learn.adafruit.com/onion-pi/overview>

[redacted] (S)

(U) Internet site; Torproject.org; "Status/Progress of TorRouter?;" 29 March 2012; UNCLASSIFIED; UNCLASSIFIED; (U) <https://lists.torproject.org/pipermail/tor-talk/2012-march/023799.html>